

Message Text

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TAGS: ESTC, COCOM, UK, RO

SUBJECT: CRYSTAL PULLERS

REF: STATE 180411 AND PREVIOUS

1. JULY 24 MEETING BETWEEN USG AND UK ON CRYSTAL PULLERS
(COCOM DOCS. (78)61; (77)409; (77)685; (77)619) DEVELOPED
FOLLOWING POINTS:

-- U.S. AND UK CONTINUE TO BELIEVE THAT III-V COMPOUNDS ARE
OF STRATEGIC SIGNIFICANCE AND SHOULD BE CONTROLLED AS WELL
AS HIGH-PRESSURE CRYSTAL GROWTH SYSTEMS FOR ITS MANUFACTURE
SUCH AS THE BRITISH MSR4 AND MSR6 AND SIMILIAR VARIAN AND
OTHER MODELS;
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-- VIRTUALLY ALL SILICON CRYSTAL GROWTH SYSTEMS CAN BE MODI-
FIED TO GROW STRATEGIC QUALITY GALLIUM ARSENIDE (GAAS). IN
THE CASE OF THE MSR2 LITTLE OR NO MODIFICATION IS NECESSARY.
THE VARIAN 2850 AND OTHERS (E.G. THE LEYBOLD HERAEUS EKZ
1600/7000 CRYSTAL GROWTH SYSTEMS APPROVED FOR SALE TO PRO-
SCRIBED DESTINATIONS) WOULD REQUIRE MORE SUBSTANTIAL MODIFI-

CATIONS INVOLVING SIGNIFICANT COST BUT THESE WOULD BE WITHIN THE CAPABILITY OF EXPERIENCED SCIENTISTS IN THE FIELD;

-- IMPORTANT FACTORS IN THE ABILITY TO GROW STRATEGIC III-V

COMPOUNDS INCLUDE THE QUALITY OF THE RAW MATERIALS AND TECHNICAL EXPERTISE;

-- THE PRIOR RECORD OF APPROVALS FOR THE MSR2, VARIOUS VARIAN PULLERS AND THE GERMAN MACHINES ARE IMPORTANT FACTORS IN THE LICENSING DECISION ON THE PRESENT CASES; AND

-- PRECISE SOVIET CAPABILITY IN THE III-V COMPOUNDS AREA MUST BE TAKEN INTO ACCOUNT. INTELLIGENCE INFORMATION IS FAR FROM BEING CONCLUSIVE BUT APPEARS TO INDICATE AT LEAST A LABORATORY CAPABILITY TO GROW STRATEGIC GAAS. (THE UK IS TO PROVIDE ADDITIONAL DOCUMENTATION IN THIS AREA).

2. FYI. MEETING DID NOT RPT NOT REACH LICENSING DECISION ON MSR2 AND VARIAN 2850. MAJOR U.S. POINT -- THAT FEASIBILITY AND EASE OF MODIFICATION NECESSARY TO PRODUCE III-V COMPOUNDS IN A SILICON CRYSTAL PULLER ARE IMPORTANT FACTORS IN DIFFERENTIATING BETWEEN THE VARIAN AND THE MSR2-- WILL BE FURTHER CONSIDERED BY UK, WHICH SUBSEQUENTLY AGREED TO CONSIDER RESPONDING SUBSTANTIVELY TO POINTS RAISED BY USG (REF A) AND VARIAN (COPY BEING POUCHED U.S. DEL, AMEMBASSY CONFIDENTIAL

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LONDON). USG, IN TURN, WILL CONSIDER MAJOR UK ARGUMENTS THAT HISTORY OF PRIOR SALES AND SOVIET CAPABILITY MAKE FURTHER CONTROL OF THIS TYPE OF PULLER IRRELEVANT, AND FURTHER THAT MODIFICATIONS TO THE VARIAN PULLERS NECESSARY TO GROW III-V COMPOUNDS COULD BE READILY MADE. IN THE INTERIM, UK WILL CONTINUE TO WITHHOLD A DECISION ON U.S. CASE.

3. FOLLOW-UP LETTER TO UK EMBASSY ON MEETING ASKED AS WELL FOR UK RATIONALE FOR APPROVING GERMAN CRYSTAL PULLERS (COCOM DOC. (77)806), WHICH WE APPROVED ON GROUNDS SIMILAR TO THOSE APPLIED TO THE VARIAN 2850. VANCE

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